

April 8, 2003

VIA CERTIFIED MAIL

Mr. Michael R. Weddle, Director of Public Works
Town of Edinburgh
107 South Holland Street
P.O. Box 65
Edinburgh, Indiana 46124

Dear Mr. Weddle:

Re: Biosolids Marketing and Distribution
Permit No. IN LA 000689
Edinburgh Municipal Wastewater
Treatment Plant, Johnson County

Your application and supporting documents have been reviewed and processed in accordance with Indiana law and the Indiana Land Application Regulations found at 327 IAC 6.1. Based on our review of your application under Indiana laws and regulations, we hereby issue Marketing and Distribution Permit No. IN LA 000689 authorizing a biosolids marketing and distribution program under the aforementioned regulation.

The issuance of this permit does not convey any property rights, either real or personal, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights or infringement of Federal, State, or local laws. It is the responsibility of the permittee to comply with any valid local laws regulating industrial waste product marketing and distribution which may contain requirements more stringent than those imposed by this permit.

The Indiana Department of Environmental Management may modify, suspend, or revoke this permit for cause including, but not limited to 1) violation of any terms or conditions of this permit, 2) obtaining this permit by misrepresentation or failure to disclose fully all relevant facts, or 3) a change in standards pursuant to Section 405(d) of the Clean Water Act, if the standards when promulgated contain different conditions, are otherwise more stringent, or control pollutants not addressed by this permit.

This permit is nontransferable to any person except after notice to the Commissioner pursuant to 327 IAC 6.1-3-5. The Commissioner may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary.

The permittee shall allow the Commissioner of the Indiana Department of Environmental Management or an authorized representative, upon the presentation of credentials, to enter upon the permittee's premises where an effluent source is located or in which any records are required to be kept under the terms and conditions of this permit, and at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit, to inspect any monitoring equipment or monitoring method required in this permit, and to sample any discharge of pollutants.

MARKETING AND DISTRIBUTION PROGRAM SUMMARY

Material approved for marketing and distribution: Biosolids

County in which the approved material is generated: Johnson

PROHIBITIONS, LIMITS, AND RESTRICTIONS

The permittee is required to comply with all conditions set forth in 327 IAC 6.1 and the following prohibitions, limits, and restrictions:

1. **MANAGEMENT PLAN:** The permittee must comply with the management plan submitted as part of the application for this permit. Refer to the attached appendix for conditions of the approved management plan.
2. **USER INFORMATION SHEET:** A user information sheet shall be developed and distributed to all users in accordance with 327 IAC 6.1-5-4(a)(2). The information sheet must be updated quarterly.
3. **POLLUTANT LIMITS:** Pollutant concentrations in the biosolids to be marketed and/or distributed must not exceed concentrations found in Table 3 at 327 IAC 6.1-4-9(c) or the concentration for Molybdenum found in Table 1 at 327 IAC 6.1-4-9(a). The biosolids must not contain a concentration of polychlorinated biphenyls (PCBs) of two (2) milligrams per kilogram or greater on a dry weight basis.
4. **PATHOGEN REDUCTION:** At least one of the pathogen reduction requirements found at 327 IAC 6.1-4-13(b) must be met and documented prior to marketing and/or distribution of biosolids.
5. **VECTOR ATTRACTION REDUCTION:** At least one of the vector attraction reduction requirements found at 327 IAC 6.1-4-15(b)(1) through (8) must be met and documented prior to marketing and/or distribution of biosolids.

6. **HAZARDOUS WASTE DETERMINATION FOR ALKALINE ADMIXTURES:** Prior to the receipt and blending of any alkaline admixtures that are or are derived from industrial waste products, the permittee must verify that the admixture has been determined, in accordance with 329 IAC 3.1, to be non-hazardous with the exception of pH limits, which may exceed 12.5 standard units. Documentation of this determination must be kept on file by the permittee for a minimum of five (5) years.
7. **MONITORING AND ANALYSIS:** Monitoring and analysis of the biosolid must be conducted in accordance with 327 IAC 6.1-5-4(b).
8. **RECORDS AND RECORD KEEPING:** Records pertaining to the permitted marketing and distribution program must be generated and maintained in accordance with 327 IAC 6.1-5-4(a)(3) and 327 IAC 6.1-5-4(c).
9. **REPORTS AND REPORTING:** Monthly reports must be generated and submitted to the Solid Waste Permits Section at the following address in accordance with 327 IAC 6.1-5-4(a)(5).

Solid Waste Permits Section
Office of Land Quality
Indiana Department of Environmental Management
100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015

Each monthly report must include the marketing and distribution report form, a list of recipients of more than one metric ton, laboratory analysis documenting biosolids quality, documentation demonstrating compliance with pathogen reduction and vector attraction reduction requirements and the user information sheet when updated.

EFFECTIVE / EXPIRATION DATES

This permit becomes effective on the 8th day of May 2003, unless a person aggrieved or adversely affected by the permit files an appeal accompanied by a request to stay the effective date. This permit expires on April 30, 2008.

Marketing and distribution activities authorized by this permit are prohibited until this effective date unless authorized under an existing permit.

During the period beginning on the effective date of this permit and extending until the expiration date the permittee is authorized to conduct a marketing and distribution program for the disposal of biosolids generated by the permittee. In order to receive authorization to market and/or distribute biosolids beyond the date of expiration, the permittee shall submit a complete

renewal application as required by the Indiana Department of Environmental Management no later than 180 days prior to the date of expiration. Failure to do so will allow the permit to expire, and if marketing and/or distribution continue, it will be an enforceable offense.

APPEAL PROCEDURES

If you wish to challenge this decision, IC 13-15-6-1 and IC 4-21.5-3-7 require that you file a Petition for Administrative Review. If you seek to have the effectiveness of the permit stayed during the Administrative Review, you must also file a Petition for Stay. The Petition(s) must be submitted to the Office of Environmental Adjudication at the following address within eighteen days of the date of this notice:

Office of Environmental Adjudication
ISTA Building
Suite 618
150 West Market Street
Indianapolis, Indiana 46204

The Petition(s) must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision, or otherwise entitled to review by law. Identifying the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, or date of this notice will expedite review of the petition. Additionally, IC 13-15-6-2 requires that your Petition include:

1. The name and address of the person making the request.
2. The interest of the person making the request.
3. Identification of any persons represented by the person making the request.
4. The reasons, with particularity, for the request.
5. The issues, with particularity, for the request.
6. Identification of the permit terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing permits of the type granted or denied by the Commissioner's action.

Pursuant to IC 4-21.5-3-1(f), any document serving as a petition for review or review and stay must be filed with the Office of Environmental Adjudication. Filing of such a document is complete on the earliest of the following dates:

1. The date on which the petition is delivered to the Office of Environmental Adjudication (OEA).
2. The date of the postmark on the envelope containing the petition, if the petition is mailed by United States mail; or

3. The date on which the petition is deposited with a private carrier, as shown by a receipt issued by the carrier, if the petition is sent by private carrier.

Pursuant to IC 4-21.5-3-3, the Office of Environmental Adjudication will provide you with notice of any pre-hearing conferences, preliminary hearings, hearings, stays, or orders disposing of the review of this decision if you submit a written request to the Office of Environmental Adjudication at the above address. If you do not provide a written request to the Office of Environmental Adjudication, you will no longer be notified of any proceedings pertaining to this decision.

Should you have any questions concerning the technical criteria utilized in issuing this permit, please feel free to contact Mrs. Brenda Stephanoff at (317) 233-0472.

Sincerely,

Jerome Rud, Chief
Solid Waste Permits Section
Office of Land Quality

JR:JLH:bes

cc: County Health Department(s)
County Plan Commission(s)
Solid Waste Management District(s)
Mr. Glen Giles, Certified Operator
Mr. Gary L. Ruston, M.D. Wessler & Associates, Inc.

APPENDIX I - MANAGEMENT PLAN FOR THE MARKETING AND DISTRIBUTION OF MUNICIPAL BIOSOLIDS

1. How the Material will be Marketed.

The N-Viro material generated at the Edinburgh Municipal WWTP will be distributed as a liming and fertilizer material in the agricultural market, as a manufactured soil blend component, as a landfill cover amendment, as a reclamation amendment and as a nursery and horticultural blend component.

Marketing of the N-Viro material will be via advertisements placed periodically in local newspapers and agricultural periodicals and by word-of-mouth. Users will be required to pick up the material.

2. Quality Control Measures

All N-Viro material will be analyzed in accordance with 327 IAC 6.1. The N-Viro Soil produced at the Edinburgh Wastewater Treatment Plant and distributed in Indiana will meet the Class A biosolids requirements as stated in 327 IAC 6.1. This includes Class A Pathogen Reduction requirements found at 327 IAC 6.1-4-13, Vector Attraction Reduction Requirements found at 327 IAC 6.1-4-15 and heavy metal concentration levels that meet 327 IAC 6.1-4-9.

Prior to blending an alkaline admixture that is or is derived from industrial waste products, documentation must be obtained, in accordance with 329 IAC 3.1, showing the alkaline admixture to be non-hazardous with the exception of pH limits, which may exceed 12.5 standard units.

3. Treatment Process Description

The facility uses the N-Viro advanced alkaline sludge stabilization with accelerated drying (AASSAD) process to stabilize and treat the sludge to exceptional quality standards. The N-Viro Soil or AASSAD process is an U.S. EPA approved process to further reduce pathogens (PFRP) and produces an exceptional quality sludge product, with a soil-like consistency. After mixing dewatered sludge cake and an alkaline admixture blend, the material is further processed by the following:

The material is heated to between 52° and 62°C due to an exothermic reaction from the alkaline additive, i.e. kiln dust and, if necessary, supplemental pulverized quicklime or other thermal processes. During this time the pH also increases to >12. The treated sludge must be stored in such a way to maintain the temperature uniformly for at least 12 hours. After this, if the solids content is not already at or greater than 50% by adding a bulking agent, the heat-treated material is dried (while the pH remains above 12 for at least 3 days) until the solids levels reach and maintain a minimum of 50%. This alternative has no ambient air temperature restrictions.

The mechanisms of pasteurization in N-Viro Soil include:

1. High pH – A rise in the pH of the material to over 12.0 creates a severe stress for most of the microorganisms in the treated sludge. By itself, this high pH will not kill enough of the pathogens to render the sludge pasteurized to the degree defined by the PFRP standards.
2. Heat at 52°C for 12 hours – When the alkaline admixture is mixed into the sludge cake, CaO is converted to Ca(OH)₂ and an exothermic reaction occurs which heats the sludge to between 52° to 62°C. Because of the insulating properties of the material, this temperature is retained for at least 12 hours. This temperature by itself is not adequate to pasteurize the sludge, but will cause pasteurization when coupled with a pH rise of 12 along with accelerated drying. Pasteurization allows for the indigenous soil microflora to be maintained while pathogens are eliminated.
3. Bulking or accelerated drying (to achieve minimum 50% solids) – The accelerated drying that is imposed on the material by the hygroscopic properties of the kiln dust results in a soil-like consistency for the material. This higher percent solids (at least 50%) increases the stress on the microorganisms present and makes it more difficult for the bacteria to multiply at rapid rates. It also provides for increased stability of the product.
4. Ammonia volatilization – When the alkaline material is added to the sludge, ammonia percolates up through the sludge adding to the disinfection capabilities of the process.
5. Increase salt concentration – The salts become an additional stabilizing factor in the long-term ecology of the treated product. The salts result from addition of approximately 1.2:1 parts alkaline admixture to dry sludge solids and are particularly inhibitory for various pathogenic bacterial species.
6. Retention of indigenous microflora – The retention of indigenous microflora creates a soil-like ecology within the material. It also allows for increased stability as the material is introduced back into the environment.

Vector attraction reduction will be met by option 6 which requires the pH of a biosolid to be raised to 12 or higher by alkali addition and, without the addition of more alkali, must remain at 12 or higher for two (2) hours and then at 11.5 or higher at the time the biosolid is marketed and/or distributed.

4. How the Material will be Stored

The N-Viro Soil product will be stored at the biosolids storage pad located at the wastewater treatment plant. Any run-off from the storage pad is directed through sanitary sewers back to the headworks of the wastewater treatment plant.

Staging of N-Viro Soil at the distribution point will not exceed 30 days. N-Viro Soil shall be spread within 30 days of the date of delivery to the distribution site. When staging N-Viro Soil the following criteria shall be observed:

- a. Staged piles shall be setback a minimum of 660 feet from residences, public buildings and schools.
- b. Staged piles shall be setback a minimum of 200 feet from drinking water supply wells, springs, wells and sink holes.
- c. Staged piles shall be setback a minimum of 300 feet from surface waters of the state.
- d. Staged stockpiles shall be set on land with slopes less than 2%.
- e. Staged stockpiles shall not be set on areas located in a floodplain, unless applied by the end of the same day it is staged.
- f. Staged piles shall be constructed and located to minimize the opportunity for puddling around the piles. Soil conditions, slope and ground cover shall be reviewed to assure proper drainage and no run-off will enter adjacent properties.
- g. Areas where staged piles were previously located will be properly cleaned/tilled to assure that no residual odor problems or ponding occurs.

5. Procedures for Addressing Noncomplying Practices by End Users

All end-users of N-Viro Soil will be provided a User Information Sheet that describes the procedures to be followed. If a user is found to not be following the proper procedures, a written notification will be provided notifying the user of their noncompliance. If after notification the user still remains in noncompliance, distribution of N-Viro Soil to that party will be discontinued and IDEM will be notified.